

American Fruit Grower

WESTERN EDITION

SEPTEMBER • 1959



Your Vines and Their
Needs

Leave the Stems on
Your Apples!

Automatic Peach Packing
President Plum in Idaho

Why the Davises Decided to Incorporate



Edwin, Albert, and James Pope (left to right) find Firestones outwear any other truck tires they've tried.

"WE GET A LOT MORE THAN LUCK WITH FIRESTONES!"

says Albert Pope, the Pope Brothers, Harrison, Ohio. "My brothers and I have found Firestone Transport tires hold up better than any truck tires we've used. They give good service in original wear and retreads—we get a lot more than just plain luck with Firestones. And Ralph Collier of Taylor Bros., our Guilford, Indiana, Firestone Dealer, gives us fine service."

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Firestone

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DROPPED LEAVES - DROPPED FRUIT:

Costly signals of magnesium deficiencies

How big could these apples have been? How much bigger or better colored would every apple have gotten — if so many leaves hadn't fallen so soon?

But getting high-box yields is not just a matter of keeping apples and leaves on the tree till maturity. The leaves you keep on the tree *must* be healthy. They must make the high quantities of nourishment needed — to produce good fruit. Dropped leaves and dropped fruit are often the result of *magnesium starvation*.

What are the danger signs? Older leaves turn yellow between the veins. The faded part may scorch rapidly. Some die. The tree withdraws magnesium for fruit and new leaf formation from other essential growth functions. This cuts down the amount of available leaf surface for the manufacturing of building materials for fruit production.

How do you cure the tree? You can cut these losses and give your tree full production power by applying mixed fertilizers containing Sul-Po-Mag — sulphate of potash-magnesia. Sul-Po-Mag is easily soluble and quickly available to get your trees back into high quality fruit production.

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Ask your fertilizer dealer for mixed fertilizer containing Sul-Po-Mag. Complete fertilizers with Sul-Po-Mag can start paying crop dividends for you ... right now.

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CHIPPER**



American Fruit Grower

Cover photograph, by Gladys Diesing, shows a closeup of Italian prunes.

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The meadow mouse has a large body, long tail, prominent eyes and dark grayish fur. He girdles the tree at ground level.

**Ground spraying with ORTHO® Endrin is the most effective —
most economical method for control of orchard mice.**

Up until now, the control of orchard mice has been an expensive, time-consuming task. Previously used control measures such as hand-baiting, and the use of wire mesh screen, required costly hard labor and were not always effective. Now, ground spray with ORTHO Endrin gives you a sure, efficient method of control.

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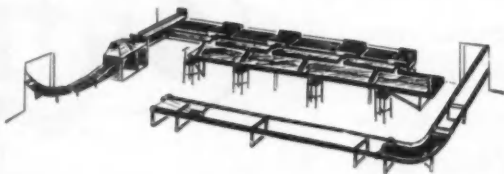
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LETTERS TO THE EDITOR

Togetherness or Independence?

Dear Editor:

Sort of paradoxical that you should choose to extol "togetherness" along with marketing orders, union tactics, etc., since the word was popularized by *McCall's* which is controlled by one of the nation's largest fruit processors. In any case, another word, "independence," used to be the honored word and symbol of your country and, I dare say, many of your subscribers still cherish its meaning.

Editorial propaganda mills also grind relentlessly. When the magazine employs the same theme in consecutive editions, readers are entitled to full facts and figures, not just tantalizing notes citing high profits of a selected group of processors, wholesalers, and retailers. If we have to read about the mills of the gods in both the March and April issues, at least give us the names of those profitable enemy outfits so we can try to buy shares!

Cleveland, Ohio Henry M. Haserot, Jr.

Fruit Growing in Lebanon

Dear Editor:

Golden Delicious apples matured in July last year at the Philip Kfoury Experimental Orchard, at Khonchara, where Robert Kfoury is continuing the work started by his late father, Philip Kfoury, in testing more than 400 varieties of fruits and nuts for use in Lebanon.

Much research needs to be done on apple rootstocks in Lebanon. East Malling rootstocks are under trial as well as Clark dwarf. The reverse band bark graft is being tried to determine its usefulness in dwarfing standard root apple trees. Also under trial as a rootstock is the wild tree-like shrub of the *Crataegus* group commonly called Paul's Thorn.

There is much work to be done by the recently organized Ministry of Agriculture Extension Service and the scientists in the research division who must take the discoveries of fruit growers like Mr. Kfoury and standardize the application of this new information.

Dacca, E. Pakistan

Jean C. Miller

SMITH HEADS USDA LAB

DR. Marion A. Smith was appointed recently by USDA to fill the vacancy of head of the Chicago Fruit and Vegetable Disease Laboratory created when Dr. Glen B. Ramsey retired on May 31. Dr. Ramsey had served for 43 years as a USDA plant pathologist and had spent most of that time in the charge of the Chicago Laboratory.

Dr. Smith came to Chicago as assistant plant pathologist in 1942 after having been a specialist in fruit diseases at USDA laboratories in Missouri for 11 years.

Motorists will be attracted to your roadside market—provided it is good-looking and well located. Working drawings for an attractive, easy-to-build stand are available for \$2.00 from AMERICAN FRUIT GROWER, Willoughby, Ohio.

AMERICAN FRUIT GROWER



Is your tractor losing torque
because of its tires?

TRACTION SURE-GRIP HAS "TORQUE CONTROL"



Torque has been boosted in the higher-powered tractors built during the past ten years. As much as 30% more drawbar pull is at your service.

But only a tire DESIGNED to harness it can make that torque pay off in extra travel per hour, in fuel savings per acre worked.

TRACTION SURE-GRIP is that tire! A look at the tread and shoulders will show you why.

Those extra-deep, ruler-straight lugs with "Wedge-In" action get a solid vise-like grip on the soil. The lugs extend the full width of the tire—and down to

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FARM TIRES BY

GOOD YEAR

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Thanks to KYS-PAK'S® protective cushion

Your apples will command a premium price, arrive at the market bruise-free when they're provided with KYS-PAK tree-to-table protection.

KYS-PAK cushions each apple in a separate ventilated compartment, completely insulated against shock. Each KYS-PAK tray is made of strong molded pulp, oil treated to prevent scald and colored so the apples may be displayed at point of sale to their full advantage.

KYS-PAK trays are available in sizes from 48 to 216 count for use with corrugated, wood or wire-bound containers.



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STREET _____

CITY _____ STATE _____

Your

VINES WILL TELL YOU

By **NELSON SHAULIS**

New York State Agricultural
Experiment Station, Geneva



This block of over 1000 acres of Concord grapes is one of the largest single uninterrupted blocks of grapes in the eastern United States. It is composed of several growers' plantings.

**A preharvest check will help you diagnose
the nutrient status of your vineyard**

THE diagnosis of the soil fertility in a vineyard can best be accomplished if the nutrient status of the grape vine is determined. This problem may be approached in the following order:

1) Specify the vineyard goal in terms of vine vigor.

Three *different* goals are: a) to get the ripest grapes without respect to yield; b) to get the most vine vigor and crop without respect to quality, and c) to get the most grapes which are of acceptable quality for the buyer.

Since acceptable quality is of paramount economic importance to the grower, this discussion will be confined to that goal, taking as a basis a 4- to 7-ton per acre Concord grape crop testing 16 to 17% soluble solids in the middle of the harvest season.

If the grape foliage is free of deficiency symptoms at harvesttime and if the weight of cane prunings is 0.3 to 0.4 pound per foot of row, there is usually no grape nutritional problem except maintenance. If the vine vigor is more than 0.3 to 0.4 pound per foot of row, nitrogen fertilization can usually be reduced. With sound foliage and low vigor, nitrogen fertilization should be increased if none of the non-nutritional factors limiting the growth of the vines is important.

On vines with sound (free of deficiency symptoms) foliage in September, the use of any nitrogen fer-

tilizer affects the amount and maturity of the grape crop as it affects vine vigor. On vines with sound foliage in September, the addition of a potassium, magnesium, or manganese fertilizer has not affected vine vigor or yield or crop maturity. These conclusions come from five trials of vineyard fertilizers on Concord and Catawba in Chautauqua County and in the Finger Lakes area in 1944-1958. They do not confirm the idea of "hidden hunger" in grapes.

2) Determine the extent to which non-nutritional factors limit the growth of your grape vines.

The low vigor of vines is, in many instances, due to factors not related to nutrient deficiency. Some of these are: a) Dead-arm lesions on vine trunks; b) Shallow soil which is droughty; c) Over cropping by retaining too many buds; d) Inadequate soil drainage; e) Root injuries by tillage and root pests; f) Winter injury to trunk.

3) Identify by leaf symptoms and/or petiole analysis the mineral elements which are in deficient amounts.

Faulty nutrition can cause grape leaves to be stunted, yellowed, blackened, or killed. These symptoms can be used to identify the deficient element. The extent of the deficiency can be rather accurately gauged by the time at which the symptom appears or by severity of the injury.

If the grower is familiar with the leaf symptoms of potassium, magnesium, or manganese deficiency, he should walk his vineyards in late August or early September to determine if symptoms are present. County agents and processors' fieldmen can be a great help in symptom identification if they have been specifically trained for this. Familiarity with leaf symptoms has made it possible to identify and gauge the severity of these nutrient deficiencies in more than 95% of the problem vines studied in the four-week period preceding grape harvest.

The alert vineyardist can notice the beginning of deficiency symptoms on only a few vines per acre. This can occur before a petiole sample, which mixes symptomless and symptom-showing vines, would be of most use. In fact, the recognition of a mineral deficiency symptom constitutes an *immediate* estimate of the approximate percentage of the element which is low in supply.

Petiole analyses from a late August or early September sampling of youngest mature leaves on bearing primary shoots can identify a mineral nutrient deficiency. This is true only if the critical value has been determined from field trials.

Another feature of petiole analyses includes pointing up elements which may become deficient or which are in

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They Decided TO INCORPORATE

Three generations of the Davis family, working as a team, believe incorporation is the answer to the continuing success of their orchard-dairy enterprise

By **WILLIAM J. LORD**
University of Massachusetts, Amherst

JOHAN A. DAVIS & Sons, Incorporated, Sterling, Mass., one of New England's leading dairy and fruit farms, is an example how family planning and working together can develop a successful farming enterprise. This is evidenced by the ownership of 1500 acres stretched over four townships in central Massachusetts.

The farm business developed into a partnership, owned and operated by John A. Davis and his two sons, George and Jonathan (Jock) Davis. Currently, 82-year-old John A. Davis is partially retired from the physical part of farming. George handles the dairy and Jock, the orchard.

George and Jock each have two sons. To continue the important concept of working together, the boys were made to feel the enterprise is "theirs" and to refer to it as "ours."

Jock's son Robert was graduated from Stockbridge School of Agriculture, University of Massachusetts, and is planning to enroll in a special course in business administration at Clark University this fall. John, another son of Jock, is transferring from Dartmouth to University of Massachusetts to major in animal husbandry. George's two sons, Dix and Abbott, will both be at Dartmouth this year. Dix was graduated in June but is returning to Tuck's Business School at Dartmouth and Abbott will be in his junior year at the University. He is majoring in biology. Both of the fathers are Dartmouth graduates.

"We agreed that a farm business partnership involving five to seven partners with varying degrees of ownership can have many drawbacks," said Jock. "We decided to incorporate. This insures that the business can continue even though something happens to one partner. Or, if he wants to sell his share of the enterprise," continued Jock, "the



Retail stand, constructed in 1953, is located in Bolton, Mass., about one mile from the orchards, hence the sign, "Bolton Orchards." All packing is done in view of the customer.

remaining partners can buy the stock within a reasonable time interval."

John A., George, and Jock take a yearly salary. When the boys return from college, they will be paid in shares of stock in addition to a regular salary. By the time George and Jock are ready to retire, the boys will have most of the stock.

"Each son will have a specific responsibility. My son Robert, for instance, will operate the orchard," Jock related. "However, major farm decisions are made as a group. You have no idea the time spent by the seven of us planning our new loose housing arrangement for the 150 purebred Holsteins."

The orchard enterprise consists of 200 acres of fruit, of which 170 acres are in apples. The other 30 acres are in peaches, pears, and quinces. "To my knowledge our 200 quince bushes are the largest planting of this fruit east of the Hudson River," said Jock.

Deer are an undesired livestock on the Davis farm. Several years ago deer killed about 150 two-year-old peach trees. As is the case with many growers, Jock did not get around to replace all the trees. One tree sprouted below the bud. This seedling peach, upon fruiting, looked promising except for fruit size. Later it was discovered that the lack of size could be blamed on a ledge under the tree.

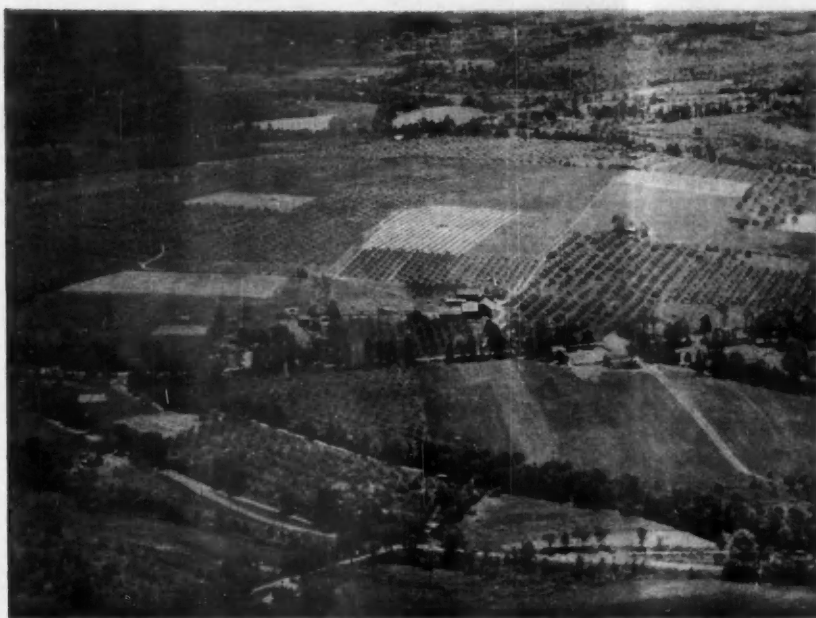
Other trees have been budded to

the seedling and size is satisfactory. John A. Davis and Sons have named the seedling "Golden Dawn" and have patent rights. Golden Dawn is of Erly-Red-Fre season, yellow flesh, and is a freestone when ripe. Several nurseries are interested in propagating the variety under contract.

Outstanding in the Davis orchard is a block of McIntosh trees planted in 1914. The trees in this block were planted 36 x 36 feet with a filler tree in the center of the square. The filler trees were removed in 1932 and every other diagonal row in 1945, leaving 18 trees per acre. The remaining trees now have 60-foot spread and none are over 20 feet in height. "It has not been necessary to lower the tree height as has been the case with many older blocks of McIntosh in Massachusetts," Jock went on to say.

"Sufficient planting distances facilitate many orchard operations, and at present the tree size is such that it is necessary to reduce tree spread on every other tree. When we get down to one tree per acre we will start all over again. Yields of over 1000 bushels an acre have been obtained for the past several years from the 18-tree-per-acre block."

"High production and efficiency of operation are musts," the veteran fruit grower stated. "Many expenses on a fruit farm do not change whether yields per acre are high or low. By



Aerial view of the Davis orchards which cover 1500 acres and extend over four townships.

Agricultural Extension Service. A John Bean 40 L Speed Sprayer serviced by one nurse truck is sufficient for the 200 acres. Four X concentration is used during the entire spray season. Dusts to supplement sprays in early season scab control.

Working in co-operation with the research pomologists from the University, they have used chemical thinners for 14 years on the Wealthy trees. The results have been successful, as evidenced by a good crop each year. Wealthy picking is usually delayed until the fruit is well colored, which is generally during the McIntosh harvest. The combination of chemical thinning and proper dates of harvest has made the Wealthy block pay on the Davis Farm.

The past few years four to eight laborers from British West Indies have been hired during the harvest season to do work other than picking. It is difficult to get local help to do anything but pick even though some of them would make more



Jack Davis, left, and his son Bob show spread of branches as McIntosh trees planted in 1914. Throughout the years the orchard has been thinned until today only 12 trees per acre remain. Yields of over 1000 bushels per acre have been obtained for the past several years.

giving the trees plenty of room it is easier to keep them low for most economical management, to maintain vigorous fruiting wood as the trees get older, and to obtain the desired pest control."

For the Davis operation, hand pruning seems more logical than investing in power pruning equipment. Pruning keeps the regular crew busy during the winter. Crew size varies from one to six or seven depending upon labor needed for the dairy part of the enterprise. By swapping hands between the dairy and fruit farm, greater labor efficiency is obtained.

Fertilizer is broadcast by machine. The standard rate is 100 pounds of ammonium nitrate per acre supple-

mented every two or three years with 200 pounds per acre of muriate of potash. Dolomitic limestone is applied at regular intervals.

Low soil pH has been and continues to be a major problem in New England orchards. During the 1930's the soil pH on most of the Davis farm was about 4; it is now above 6.

In the past the Davis Farm has supplemented the fertilizer program with 300 to 400 tons of hay for mulch each year. Now that strawy manure is available from the pen stables it is spread in the orchard. The entire orchard can be covered once in five years.

The Davis Farm uses the standard spray program recommended by the

money doing something other than picking apples piece work.

The orchard is entirely palletized. It is the job of two girls to level the boxes. The foreman and two men follow with a tractor and trailer loaded with pallets. The foreman places the pallet near the filled boxes. Correct placement is important to facilitate loading it onto the truck. The foreman and two men then place 36 boxes on the pallet. The trailer is used as a reservoir, a place to put excess filled boxes or to supply boxes to complete the pallet load.

A tractor loads the pallets on trucks by means of a front-end pallet lift of which Jock was a co-designer. At the

(Continued on page 16)

State News

CALIFORNIA Canning Peach Prices Set

A PRICE of \$45 a ton roadside has been established for freestone peaches for processing in California after California Freestone Peach Association's first offer of \$50 a ton was rejected.

"All of our association tonnage has been purchased by canners and every association grower is now assured of a market for his fruit," says Charles Telford, Modesto, association manager.

The association's estimate of the total crop to be delivered has been shrinking daily, and it is now believed that only around 85,000 tons of freestones will reach the processing market this year as compared with the 120,000 tons delivered in 1958 at \$47.50 a ton.

California Freestone Peach Association's most recent estimate of 37,000 tons for its pool of canning fruit is 13,000 tons less than its original preharvest expectation.

The state's cling peach growers have accepted an average of \$58 a ton for the 1959 crop. The California Canning Peach Association agreed to the canners' price offer of \$50 a ton plus an average of \$8 for grade premiums and special bonuses. This was after the association's original asking price of \$60 was rejected.

This California grower's association's current estimate based on the harvest of extra early varieties indicates that the crop may pick near 560,000 tons.

The 1959 returns will be the lowest of any of the last five years.

FLORIDA Early Peaches

THE American Sumatra Tobacco Company of Quincy, in northwest Florida, is trying peach production again after a failure 30 years ago.

The problem then was that trees were not adaptable to the warm climate. This time hopes rest with a variety that is early bearing and requires a minimum of cold weather to put on top quality fruit of good size, the "Maygold."

The 80 acres of trees set out three years ago produced an average of one-half bushel of top quality fruit, and a fair amount of lesser quality. In all, 73,000 half-bushels of No. 1 grade went to brokers. The peaches were defuzzed, automatically graded, hydrocooled, and shipped in refrigerated trucks.

The cooled peaches received a warm reception in markets in the East and

Midwest, according to W. Sietzmeir, general manager of American Sumatra. He added that some advantage of an early crop was lost because of a three-week dry spell at a critical period. The company expects early peaches to be big business when its total of 160 acres come into full production.—James J. Cox.

WASHINGTON

Apple Law Killed

WASHINGTON'S C Grade apple law restrictions were declared unconstitutional by the Yakima County Superior Court in late July.

This law has been passed by the last session of the state legislature. To test its validity, Cecil C. Clark, Wapato fruit grower and 15th District state representative, brought court action against State Director of Agriculture, Joe Dwyer.

The bill eliminated C grade in red and partial red varieties of apples, a matter Clark labeled as arbitrary since it does not apply to apples of other colors.

VIRGINIA

Processing Apples Offered

THE board of directors of Eastern Fruit Marketers Co-operative, Inc., announced that it is offering apples to processors on the basis of U. S. One Canner grade, 2½ inches

up, at \$2.65 per cwt for York Imperials and \$2.35 per cwt for all other varieties.

The directors regard this as fair, realistic, and practical for both growers and processors; a rate at which apple products can be sold to consumers at prices which will continue adequate consumption.

NEW YORK

Apple Promotion

NEW York state's first Apple Marketing Order Advisory Board was organized in July and proposed an initial budget of \$320,000 for promoting New York apples and doing market research.

The board, appointed by State Agriculture Commissioner Don J. Wickham from a list of nominees, elected Marion Johnson, apple grower of Williamson, as chairman. Johnson also is president of New York State Horticultural Society and a director of National Apple Institute. Roger Forrence, Peru, eastern New York grower, was elected vice chairman, and C. Henry Gowdy, Hudson Storage and Ice Corporation, Hudson, was made secretary.

Funds to advertise and promote the New York apple crop, as well as providing for market research, are to be derived from assessments on apples sold in this state. Fresh apples will be assessed 3 cents a bushel, apples for processing except for juice, 4 cents per 100 pounds, and apples for juice, 2 cents per cwt.



NATIONAL PEACH COUNCIL SPONSORS TRADE MEETINGS

The 1959 Peach Trade Conferences were held in the nation's two great volume consuming areas, the Northeast and the Midwest. Philadelphia was the scene of the eastern meeting co-chaired by R. Samuel Dillon, Jr., president of National Peach Council, and H. D. Williamson, head produce buyer, American Stores Co. The Chicago Trade Conference had for its leader Curt Eckert, chairman of NPC promotions committee.

At extreme left in picture above A. E. Bass-

ham, of Summersweet Orchards, Wynne, Ark., smiles approvingly at display of fancy family-pak Redhovens shipped from his orchards especially for the Chicago conference. Bassham is 1st vice-president of NPC. Also approving are, left to right: Jack Bittner, district marketing specialist, St. Joseph, Mich.; Martha Crane, food editor, WLS Radio-TV, Chicago; Curt Eckert, Eckert Orchard Association, Belleville, Ill.; G. Geller, mgr., California Tree Fruit Agreement, Sacramento.

AMERICAN FRUIT GROWER



State

REPORTS WESTERN EDITION

How Washington Growers Prevent Harvest Drop on Apples and Pears

THREE types of growth-regulating chemicals are used to prevent harvest drop on apples and pears in Washington. Each of these has specific characteristics which make them applicable to certain conditions in a given orchard.

The grower, in selecting the material to use, should take into account the location of his orchard, its size in relation to the time required to harvest, and the varieties of apples and pears. It is absolutely essential that the correct concentration and correct form of the material be strictly adhered to if the right response is to be obtained.

Naphthalene acetic acid (NAA) for the past 20 years has been and still is the material most generally used for drop prevention. Its effective period is about three to four weeks under relatively warm fall conditions with no frost. The period from application to effect is two to three days.

In an orchard where there are both Delicious and Winesap varieties maturing at different times, it is often necessary to spray each variety separately in order to obtain the greatest protection from drop. NAA must be applied so that it becomes effective before apples or pears begin to drop.

NAA is applied on apples at the rate of 48 grams per acre as a concentrate spray, 4 grams per 100 gallons of spray or 10 ppm (parts per million) as a dilute or bulk spray application. Bartlett pears require 24 grams per acre as concentrate, or 5 ppm as a dilute spray. NAA can be applied with complete safety at the proper time.

As a drop preventive 2,4,5-TP has the advantage of a longer effective

period. This period of five to seven weeks is accomplished only if 2,4,5-TP is applied by ground spray equipment in a bulk application, a minimum of 400 gallons of spray per acre. Where this method can be used, Winesap and Delicious can be sprayed at the same time with a high degree of drop control.

This chemical requires seven to 12 days to become effective. It is best adapted as a ground spray at the rate

of 10 ppm. When applied in this manner, using at least 400 gallons of spray, it has never caused injury on apples.

When applied in concentrate form by aircraft, the effective period is about the same as that of NAA. Occasionally, 2,4,5-TP has caused injury to terminal shoot growth on young trees when concentrated for aircraft application. This condition, noticed the year after application, has not been



SECOND-LEAF ORCHARD — Gattie, left, and Stribling's fieldman, Walter Krause consult regularly. Note trees' uniform growth.

"OF 5,000 STRIBLING PLUM TREES
I'VE LOST ONLY 4"

Says Howard Gattie
Reedley, California Orchardist



"When people admire my plum orchard, I'm happy to give the credit to Stribling's Nurseries," Gattie declares. "Two years ago I knew nothing about fruit trees, so I've simply followed Stribling's advice."

Howard adds that this advice included everything from the selection of stock to field preparation and care — with plenty of free on-the-spot supervision by Walter Krause, one of Stribling's fieldmen.

"I think even Walt was surprised when we lost only 4 trees out of 5,000 these first two years," says Gattie. "This proves you can't top Stribling's stock for quality."

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BOOKS for your orchard library

• **Hanna's Handbook of Agricultural Chemicals**, by Lester W. Hanna. Contains descriptions of over 500 commercial chemicals. Various common names and numerical designations of fertilizers, fumigants, fungicides, weed killers, insecticides, rodenticides, etc., are explained as to composition, use, cautions, and antidotes in this pocket-size manual. 209 pages \$5.95

• **Irrigated Soils**, by D. W. Thorne and H. B. Peterson. This book discusses soil management of arid and semi-arid soils where irrigation is necessary to crop production. Drainage, land reclamation, soil microbes, organic matter, fertilization, and crop management are discussed fully. The chapters on planning and carrying out irrigation are especially valuable. 392 pages \$7.50

• **Western Fruit Gardening**, by Reid M. Brooks and C. O. Hesse. A handbook for the home gardener in the West on fruit varieties; climatic adaptations; soil, water, and nutrient requirements; pruning and propagation; and control of diseases and pests. 287 pages \$4.50

• **American Wines and Wine Making**, by Philip M. Wagner. A practical illustrated book for the small grape grower and home wine-maker. Chapters on French wine-growing and on the American wines of California and the East serve as a first-rate guide. 230 pages \$5.00

• **Plant Regulators in Agriculture**, edited by H. B. Tukey. Seventeen specialists present the many different uses of plant regulators and tell what they are, how they operate, how plants respond, and where they belong in agriculture. 269 pages \$6.50

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Hot Springs only year 'round temperature controlled pool with a separate pool for the kiddies.

extremely serious, but growers are cautioned about using 2,4,5-TP as a concentrated application on young growing trees. Since the blossom end of pears ripens prematurely when they receive a 2,4,5-TP application, spray drift should be kept away from pears.

At 3 ppm, 2,4-D is a safe and highly effective spray in drop prevention on Bartlett pears. Its chief advantage over NAA is again a long effective period. In addition, it has a very low cost. Only the amine form of 2,4-D should be used and it must be applied in bulk spray at a concentration of 3 ppm.

Stock solution from a 4-pound acid equivalent per gallon formulation may be prepared by mixing 1 quart 2,4-D with 12 gallons of water. By using ¼ pint of this stock solution per 100 gallons of spray mixture, 3 ppm spray is obtained. It is important to avoid using any ester forms of this chemical.

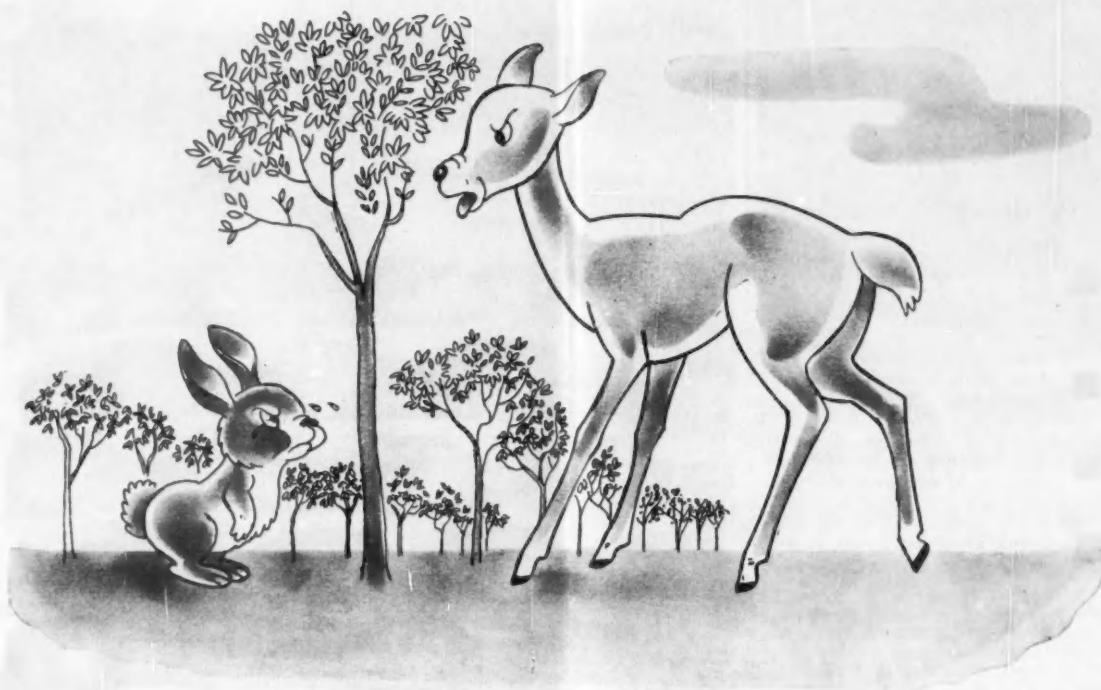
While 2,4-D may be used on Winesap and Stayman varieties, it is not effective on other apple varieties. Occasionally, a foliage dwarfing on the lower, weaker limbs of Winesap is discovered the year following application. This type injury is most often observed in warmer valleys at the lower elevations. Some Winesap and Stayman growers in the upper, cooler valleys have continued to use 2,4-D very successfully for many years.

On apples 2,4-D must be applied about three weeks before the anticipated drop, since it requires that long to become effective. It should be applied in a bulk spray only at the rate of 8 ppm, using the amine form as previously described for pears.

Drop prevention sprays have been used with a high degree of success by Washington apple growers for 20 years. When used properly, they have saved 25% of a crop in hundreds of cases. However, in recent years apple growers have been concerned about possible misuse of the sprays. Misuse comes from using the sprays to hold the fruit on the tree for color development even though the fruit has passed optimum maturity.

Drop prevention sprays are intended only to hold the fruit on the tree until it can be harvested at the most desired maturity and to prevent heavy losses during harvest periods where there is considerable wind or when harvest is delayed by rainy and cool periods.—Richard D. Bartram, Chelan County Extension Agent, Wenatchee, Wash.

A "San Bernardino County (Calif.) Breakfast," spearheaded by citrus and apple growers, poultrymen, and dairymen, will be held October 1 in San Bernardino. For every ticket sold to a grower or farmer, some industrial, business, or civic leader is being invited as a guest.



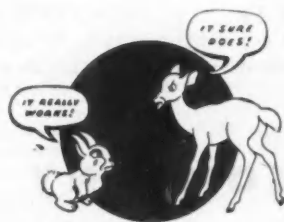
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Z.I.P. taste repellent can be used safely during either the growing or dormant season. When animals encounter plants or trees treated with Z.I.P., they generally leave the area to find more palatable feed. Get safe, effective protection, use new improved Z.I.P. for . . .

- easier mixing
- even spreading
- better sticking qualities
- long-lasting protection
- no settling out

Z.I.P. can also be used as a border treatment for vegetables, greens, fruits, and berries. Write for more information.



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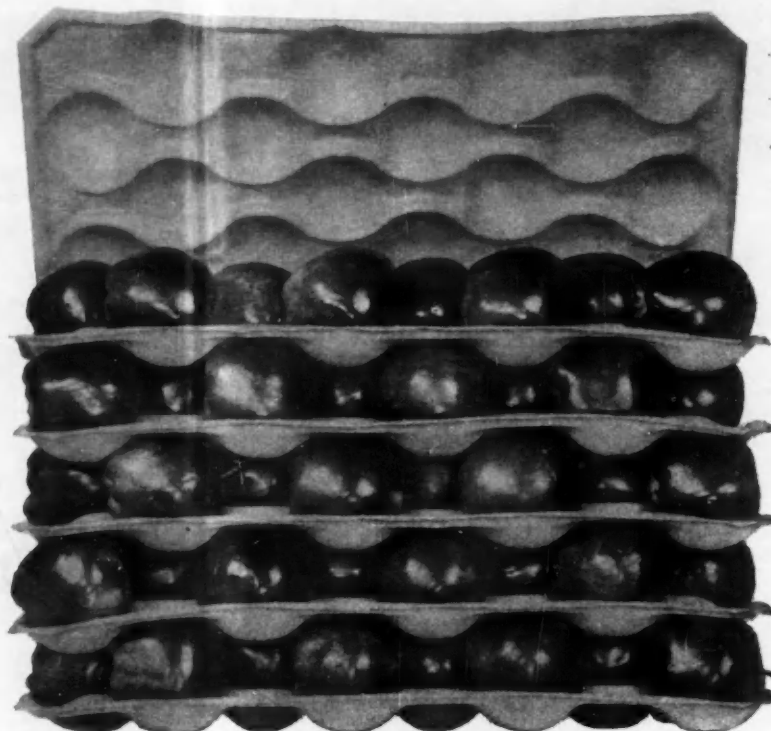
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The new Friday Spring Cushion tray provides a unique spring-supported hammock for each apple. This two-sided tray is designed with a double function; it not only fully supports the fruit in the layer it holds, but also fits evenly upon the apples in the layer beneath. Each apple is held firmly, but apart, in its own measured soft fiber cup, eliminating friction and bruising. Their exclusive, unique design and structure equally protects long or round apples. Your fruit will arrive at the market in an appealing "orchard-picked" condition.

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The design and structure of these NEW FRIDAY SPRING CUSHION TRAYS make them equally perfect for use in hand packing or in automatic machine packing, and they are likewise suitable for use in either the fiber or wooden container.

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CALENDAR OF COMING MEETINGS & EXHIBITS

Aug. 30-Sept. 2—American Institute of Biological Sciences and member biological societies, including American Society for Horticultural Science, annual meetings, Pennsylvania State University, University Park.—R. E. Larson, Chairman, Penn. State Univ., University Park.

Aug. 31-Sept. 1—United Fresh Fruit and Vegetable Association annual Merchandising and Management conference, Drake Hotel, Chicago, Ill.—Association headquarters, 777 14th St., N. W., Washington 5, D.C.

Sept. 4-12—New York State Fair, Syracuse.

Sept. 11-12—New Jersey State Horticultural Society summer fruit tour, leaves for West Virginia from: College Farm, New Brunswick, and G.L.F. Feed Plant, Bordentown.—Ernest G. Christ, Sec'y, Horticulture Bldg., College Farm, New Brunswick.

Sept. 14-16—United Fresh Fruit and Vegetable Association annual merchandising and marketing conference, Drake Hotel, Chicago, Ill.—Association headquarters, 777 14th St., N.W., Washington 5, D.C.

Sept. 14-16—Texas Citrus and Vegetable Growers and Shippers meeting, Hotel Statler Hilton, Dallas.—Austin E. Anson, Exec. Vice Pres., 306 East Jackson, Harlingen.

Sept. 16-19—Jackson County Apple Festival, Jackson, Ohio.

Sept. 17-19—8th Annual Apple Festival, Murphysboro, Ill.—For information, Robert C. Voss, 1303 Walnut St., Murphysboro, Ill.

Sept. 23-25—Florida Fruit and Vegetable Association meeting, Hotel Fontainebleau, Miami Beach.—Joffre C. David, Sec'y-Treas., Orlando.

Oct. 4-7—National Association of Marketing Officials annual convention, Asheville, N. C., and Atlanta, Ga.—Wm. A. Wunsch, Pres., State College, N. M.

Oct. 11—Ohio Nut Growers Association fall meeting, Davey Technical Service Center, Kent, Ohio.—E. M. Shelton, Sec'y-Treas., 1468 W. Clifton Blvd., Lakewood, Ohio.

Oct. 15-24—National Apple Week Association, Inc., fall national apple promotion.—National Apple Week Ass'n, Inc., 1302 18th St., N. W., Washington 6, D. C.

Oct. 21-23—National Agricultural Chemicals Association 26th annual meeting, French Lick Sheraton Hotel, French Lick, Ind.—Lea S. Hitchner, Exec.-Sec'y, 1145 19th St., N. W., Washington 6, D. C.

Oct. 27-29—Florida State Horticultural Society 72nd annual meeting, Everglades Hotel, Miami.—S. John Lynch, Pres., 29800 Newton Rd., Homestead, Fla.

Oct. 27-29—Western Growers Association meeting, Ambassador Hotel, Los Angeles, Calif.—Frank E. Castiglione, Sec'y, 3091 Wilshire Blvd., Los Angeles 5.

Nov. 23-24—Illinois State Horticultural Society annual convention, Abraham Lincoln Hotel, Springfield.—Robert Rogers, Sec'y, Carbondale.

Nov. 30-Dec. 3—Entomological Societies of America, Canada, and Ontario 1st joint meeting, Sheraton-Cadillac Hotel, Detroit, Mich.—Arnold Mallis, Gulf Research & Development Co., P.O. Drawer 2038, Pittsburgh 30, Pa.

Dec. 3-4—Idaho State Horticultural Society, 65th annual meeting, Hotel Boise, Boise, Idaho.—Anton S. Horn, Sec'y, 317½ North 8th, Boise.

Dec. 6-10—National Junior Vegetable Growers Association convention, Roosevelt Hotel, Washington, D. C.—Grant Snyder, Nat'l Chairman, French Hall, U. of Mass., Amherst.

Dec. 7-9—Washington State Horticultural Association annual meeting, Wenatchee.—John C. Snyder, Sec'y, Pullman, Wash.

Dec. 7-10—Vegetable Growers Association of America annual convention, Dennis and Shelburne Hotels, Atlantic City, N. J.—R. M. Frederick, Exec. Sec'y, 528 Mills Bldg., 17th St. and Pennsylvania Ave., N. W., Washington 6, D. C.

Feb. 3-5—Ohio State Horticultural Society annual meeting, Neil House, Columbus.—C. W. Ellenwood, Sec'y, Rt. 2, Wooster.

Feb. 8-10—American Pomological Society joint meeting with State Horticultural Association of Pennsylvania, Yorktowne Hotel, York, Pa.—George M. Kessler, APS Sec'y-Treas., East Lansing, Mich.

Feb. 18-25th Annual National Cherry Pie Baking Contest, Sheraton Hotel, Chicago, Ill.—National Red Cherry Institute, 35 E. Wacker Drive, Chicago 1, Ill.

Feb. 21-24—National Peach Council annual convention, Sheraton-Park hotel, Washington, D.C.—Bob Rogers, Sec'y-Treas., 302 Walnut St., Carbondale, Ill.

April 14-15—2nd Western Conference on Post Harvest Physiology & Biochemistry, Univ. of Calif., Davis.—Public Service Office, Univ. of Calif., Davis.

Apr. 28-30—Shenandoah Apple Blossom Festival, Winchester, Va.



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Stone Fruits

Automatic Peach Packing

WITHOUT automation the crew of 40 workers at the Crowley Ridge Peach Growers Association packing house in Forrest City, Ark., could never handle 900 packed wire-bound crates every hour as it does now.

The incoming field crates are automatically dumped onto a conveyor system that carries the fruit through a de-fuzzer, graders, and sizers to four automatic filling stations. Empty wire-bound crates, with tops folded back, are brought to the area on overhead conveyors leading to the filling stations and are automatically moved into position over mouth of filler.

The weight of the fruit gradually lowers the crate and when a pre-set poundage is reached, it is ejected and is automatically moved to a master conveyor which carries it to a hydro-cooler. The capacity of the hydro-cooler was increased 20% by the rectangular shape of the wirebounds.

It was estimated that it would require 156 persons to pack 900 crates of peaches if manual operations, and round containers were used.



Everything about this operation is automatic. Peaches are de-fuzzed, graded, sized, and conveyed to filling stations. Rectangular wirebound crates increase capacity of hydrocooler.

Peach sales are by Summersweet Orchards Sales Company which also supervises the packing operation.

President Plums in Idaho

THE President plum is new in Idaho, but acceptance has been good and growers have made money even though acreage is small. About

75 cars are marketed in late September.

But acreage of this late-ripening, large, European-type plum is increasing. In 1956 there were 37,862 trees, while the 1958 total was 40,498. During that same period, the number of Italian prune trees decreased from 340,886 in 1956 to 328,152 in 1958.

The President variety seems to do



Smileage on the farm

TRACTOR TIRE CLOSE-OUT SALE

Big savings — B.F. Goodrich Super Hi-Cleats

For a limited time your B.F. Goodrich Smileage dealer is selling full-size B.F. Goodrich Super Hi-Cleat tractor tires at prices starting at only \$37.75.

Here's a once-in-a-lifetime opportunity to get these pull-better, stay-clean, easy-to-maintain Super Hi-Cleat tractor tires at a new low price. A small down payment will put a

set of these hard-working B.F. Goodrich tractor tires on your tractor now—and you have months to pay the balance.

Your B.F. Goodrich Smileage dealer has a complete line of tires for every rolling wheel on your farm. He is listed under Tires in the Yellow Pages of your phone book. See him today. *The B.F. Goodrich Company, Akron, Ohio.*

equally well in Canyon, Gem, Owyhee, and Payette counties.

Arthur Van Slyke of the Central Cove area near Wilder in Canyon County, believes the President definitely has a lasting place on the fresh fruit market. He has planted 21 new acres, spacing the trees 20x20 feet with the Giant variety placed every third tree in every third row as a pollinator. The trees bear some fruit the second year.

The variety must be thinned to get good size. Art feels that if he could control pollination by reducing the number of pollinator trees, the thinning job would be easier. As a general rule, the fruits are thinned to at least 4 inches apart.

Van Slyke applies 3½ to 5 pounds of ammonium nitrate per tree each year about six weeks before bloom. He doesn't prune every year, but sprouts are cut out and branches thinned so the tree is not a brush pile. He is heading his new planting closer to the ground. To prevent winter sunscald to which these trees are very susceptible, the tree trunks are shaded from the afternoon sun in January, February, and March.

Alfalfa makes a good cover crop in the bearing orchard. Van Slyke mows it or beats it down a few times a year, but never harvests it.

The plums pack 1¾ to 2¼ inches or 1¾ to 2¼ inches. The consumer wants large, deep blue fruit. Yield in a bearing orchard is a car to the acre, and Art loads about 896 half bushels per car. Plums are packed in half bushel baskets, but if pre-cooling is used, they may go to cardboard boxes holding the same amount.

Van Slyke solves his problem of mealy plum louse by using a very delayed dormant spray of parathion and oil. Sometimes he gets it on only a few days before bloom. Conditions in his area seem to be favorable for this spray and he gets by with no injury.

Twig borer, peach tree borer, and slugs must also be controlled. He uses the summer DDT trunk sprays to control peach tree borer.

Other successful growers of the President variety are Ralph Skinner and his son, George, of Emmett in Gem County. They each own 10 acres.

Earl Kirk, of Payette, in Payette County, one of the first to grow Presidents, has expanded his acreage and has worked out a good system of pruning.

Leslie Reed, of Emmett, has experimented with chemical thinning.

All growers are enthusiastic about the President.—Anton S. Horn, Ext. Hort., University of Idaho, Boise.

THE QUESTION BOX

Don't be perplexed! Send us your questions—no matter how big or small. A 4-cent stamp will bring you an early reply. Address: The Question Box, AMERICAN FRUIT GROWER, Willoughby, Ohio.

McINTOSH MECHANIZATION

Since McIntosh apples are easily bruised and have to be handled especially carefully, what are the chances of ever being able to handle them mechanically?—Massachusetts.

The Agricultural Marketing Service of USDA has developed a mechanical packing line that handles McIntosh just as gently as does hand labor. The apples move mechanically from storage to packing case with little or no bruising. They make the trip quickly and easily—with less labor and at less cost to the packer.

Although still in the experimental stage, the AMS-designed line promises to greatly improve the operation of East Coast apple packing houses.

The experimental line has six principal parts: an automatic dumper, an adjustable sorting table, a dimension sizer, an automatic box filler, a return flow belt, and a mechanical tray packer.

NECTARINES FOR NEW JERSEY

I understand there are nectarines that have been bred and tested for growing under New Jersey conditions. Can you give me the variety names and tell me where I can obtain trees?—New Jersey.

The varieties are Nectarose, Garden State, Nectaheart, Nectacrest, and Nectalate. Send orders to New Jersey Peach Council, Inc., R. D. No. 3, Princeton, N. J.



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For all imple-
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free-rolling
wheels.

B.F. Goodrich *farm tires*

SEPTEMBER, 1959

15



To pick apples correctly, lift fruit to one side and up giving slight turn as you do so.



When apples are hard to pick index finger is placed where fruit stem and spur are joined.

Apples

Leave the Stems!

TEARING out its stem makes even a fancy apple a cull. Stem pulls break the skin and make the fruit vulnerable to bacterial attack by exposing the flesh. Compared with an injury such as small scab spot, stem pulls are much more apt to stimulate decay and many of the "rots" that develop in storage are due to this defect.

Stem pulls are in the same category as bruising through which millions of bushels of apples lose their value each year. At the present time, USDA standards do not require stems for apples, however, most of the large apple-producing states definitely down-grade fruit injured in this way. In Washington State apples from which the stems have been pulled are considered culls.

Stem pulls can be eliminated to a great extent by proper picking. Careful instruction to each picking crew

is a necessity, and new pickers need to be shown, not just told.

Probably the best way to pick apples is to raise the fruit to one side with the fingers and twist the wrist. If apples are hard to pick, the end of the thumb or forefinger should be placed against the stem at the point where it is attached to the fruit spur or twig. Holding the finger in this way as the twist is made enables the picker to remove the fruit without pulling stems or breaking fruit spurs. When apples are pulled instead of being twisted, very often the spurs come off with them, thereby reducing the next year's crop.

THEY INCORPORATED

(Continued from page 11)

time Jock was considering a completely palletized operation no pallet lifts were available for use in orchards. Jock designed the front-end pallet lift and had it made to specifications by a local manufacturer of hydraulic shovels.

Three trucks and two drivers are used for hauling so that one truck is

always available for loading in the orchard. A truck carries 8 or 10 pallets.

Of the yearly 60,000 to 80,000 bushel crop 14,000 bushels are stored on the Davis Farm. The balance is hauled to a storage 15 miles away.

"Even if my entire crop were stored on the farm, I would use pallets in the orchard and trucks for hauling," said Jock. "The investment in old trucks is relatively small and they can be used for many purposes," he continued.

The refrigerated storage on the Davis farm is used principally to supply the retail stand.

The retail stand is located at the junction of two secondary routes (110 and 117) about one mile from the orchards. The stand, constructed in 1953, is a 72 x 60-foot Butler steel building erected by the Davis farm help. It has a 24 x 72-foot display area with a packing area in back. All packing is done in view of the customers. Parking facilities are ample with a 30-car macadam lot in front of the stand and a 2-acre lot in back.

Fruit is sold in 2-, 4-, 8-, and 16-quart containers and bushel baskets. People are encouraged to come often rather than buy large quantities at one time.

Visiting the Davis fruit stand one is impressed with the parking facilities, neatness of surroundings and the stand itself, the attractive fruit displays, and the friendliness of the sales personnel. The sales girls wear green smocks with a red apple on each pocket.

John A. Davis & Sons, Incorporated, is an outstanding example of a family achievement made possible by working as a team. Talking to Jock, one gathers that his brother George and he are ready to start "sitting on the bench" and let the boys take over more of the responsibilities.

THE END.



**Introducing the New
Economy Bagger**

Average Growers Report Savings Up to \$2,000.00 Per Year on Containers

FEATURES:

1. Eliminates Bruising.
2. Bags 100 Bu. per hour.
3. Bags Bushels or 1/2 Bu.
4. Handles paper bags, burlap, mesh of polyethylene.
5. All sponge rubber padded, heavy duty canvas covered.
6. Customers prefer bags for loading into cars.



Manufactured and Distributed by
WISCONSIN ORCHARD SUPPLY COMPANY
 Dept. BF, Oconomowoc, Wisconsin

IDEAL FOR:

- Roadside Stands
- Point of Sale presentation.
- Bulk Sales
- Fresh Market Sales
- Institutional Selling
- Saves Baskets—use bags
- Bags Apples, Pears, Peaches, Nuts, Potatoes, Peppers, Onions, Cucumbers, Anything that Rolls!

Price \$139.50

Plus Crating Charge \$3.00

Shipping Wt. 90#

WINDFALLS



By HENRY BAILEY STEVENS

Two Straws in the Wind I GOT a new look at the eastern apple market the other day from a meeting of

New England growers at the Chandler orchards in Sterling Junction, Mass. Testimony was unanimous that controlled atmosphere storage, if properly used, can mean a steady all-year consumer demand.

"Don't let the harvested fruit sit out more than one night." "Be sure your wood is clean; fumigate it if necessary." "Precool enough pallets so that you can fill the CA storage quickly." "Don't think you can put poor apples in and take good ones out." "Firm fruit is a No. 1 requirement."

Success at a Deep Level AFTER lunch an expert in advertising and promotion, E. Brook Lee, Jr., of Scott Paper

Co., caught us up with current concepts of psychology in the trade: how in order to sell security into the foundations of an industry, we must understand people from their very inside, feel ourselves a part of them, and persuade them to feel at one with us. This is *empathy* as distinct from *sympathy*, which feels with people but at arm's length. Mr. Lee's



E. Brook Lee, Jr.

company believes this doctrine so thoroughly that it has recently formed an advisory committee of its own customers to help guide its policies. "Make yourself one with the consuming public" is the kernel of the philosophy.

A three-dimension apple tree with cellophane bags of McIntosh hanging from its branches has had a very successful trial run in 48 north-eastern supermarkets. It was designed by Paul Sullivan, and the Apple Institute plans to put it on the full road this season. The customer walks up to a branch, unclips her own bag and feels herself closer to the primal source. It's a "soft sell" idea, and again puts the emphasis on empathy.

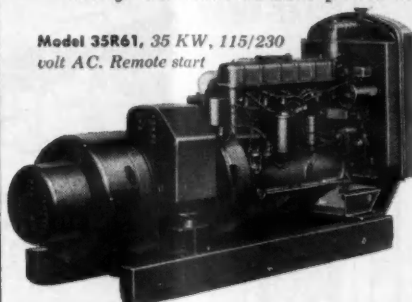
Address your "Windfalls" contributions to Henry Bailey Stevens, AMERICAN FRUIT GROWER, Willoughby, Ohio.

SEPTEMBER, 1959

Low-cost protection against power-failure losses

KOHLER ELECTRIC PLANTS

Model 35R61, 35 KW, 115/230
volt AC. Remote start



KOHLER CO. Established 1873 KOHLER, WIS.

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Enameled Iron and Vitreous China Plumbing Fixtures • Brass Fittings
Electric Plants • Air-cooled Engines • Precision Controls



The right time to protect your investment against power failure is now—before the emergency. A Kohler electric plant may prevent crippling loss when storm or accident cuts off regular electricity. Provides reliable power for storage refrigeration, conveyors, packing equipment, general lighting—and maintains automatic heat, water circulating pumps in greenhouses. Cost is often less than losses caused by a single power stoppage. Models for specific needs, with all accessories for full unattended protection. Sizes to 100 KW, gasoline and diesel. Write for folder F-59.

When changing your address, or in any matter concerning your subscription, please send your address label from your last copy of AMERICAN FRUIT GROWER. Having your address label and the information that it contains enables us to give you quick and efficient service. Send address label to: Emmie Staudt, Circulation Department, AMERICAN FRUIT GROWER, Willoughby, Ohio. Allow six weeks for changes to be made.



The AP-PEACH PICKING BAG

Saves Time — Reduces Bruising
Heavy canvas over rigid frame protects fruit. Empties quickly through bottom. Especially for peaches and easily bruised apples. Write for folder.

JOHN C. BACON CORP., GASPORT, N.Y.

ZON SCARECROW

Positive protection. Uses carbide or acetylene. No pilot. Retail \$59.50. Distributorships and dealerships available. Stocks in San Francisco, New Orleans & Baltimore.
B. M. LAWRENCE & CO.
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RUST PROOF, ROT PROOF, MAINTENANCE FREE

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sizes from
\$2990.00
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- No side tank below floor level
- Completely insulated
- Guaranteed lowest cost
- Mechanical or block ice cooled

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WRITE—WIRE—CALL

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On-the-spot brush disposal with

WOOD'S *Offset*

**ROTARY MOWER
SHREDDER**
Model 080



Eliminates buck raking and hauling!



**CUTS
PRUNING TIME
50%**
Does all orchard
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- Cutter extends 5-1/4 ft. to right of hitch point
- Cuts 6-2/3 ft. swath
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Rigid frame, canvas covered bucket designed especially for peaches and easily bruised apples. Excellent for other fruits. Built front stays protect against ladder. Top large enough for picker to lay fruit in carefully. Bottom is quick-release type.

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NEW! VIRUS - FREE STRAWBERRY PLANTS

Available in all leading varieties. Newest blight-resistant pear introductions Ayres, Hoskins, Moores, Dabney. Latest U. S. Dept. of Agriculture peach introductions. Complete line of nursery stock. Write for FREE color catalog and \$2.00 FREE bonus information.

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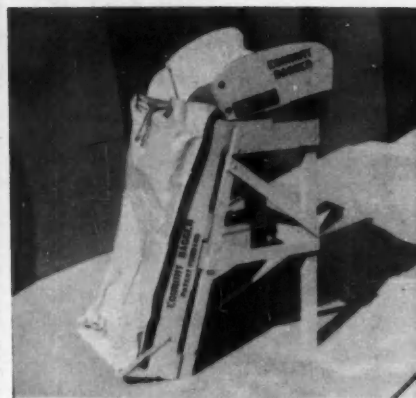
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CHASES rabbits FAST!
EFFECTIVE! One spraying can chase rabbits for several months.
ECONOMICAL! One gallon of concentrate makes ten gallons of spray.
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SIMPLE! Easy to mix, easy to use.
FRIENDLY! Chases rabbits without harming them.

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NEW FOR YOU



Low Cost Bagger

Many growers with modest size orchards have wanted a bagger which would do a prepackaging job for them at low cost. Wisconsin growers have found such a piece of equipment, and growers there tell us it will bag up to 100 bushels per hour and will handle paper, burlap, mesh, or polyethylene. Sponge rubber padding protects the fruit, and the bagger has been used for apples, pears, peaches, nuts, potatoes, peppers, and onions. The machine weighs 90 pounds shipped, and costs only \$139.50. Write to W. E. Aeppler, Wisconsin Orchard Supply Co., Dept. BF, 704 Concord Rd., Oconomowoc, Wis.



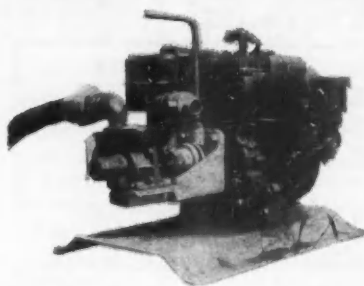
Easier Packing

Midwestern growers like the new machine pictured above which has resulted in substantial savings. With one stroke of the foot pedal the machine completely sets up a corrugated strawberry container. The machine was specifically designed for use with Bas-Kit containers introduced by Fruit and Produce Packing Co.

AMERICAN FRUIT GROWER

- Versatile Bagger
- Little Giant Pump

three years ago. Fruit and Produce Packing invites all AMERICAN FRUIT GROWER readers to come and see the new machine at the Fruit and Produce warehouse in Springfield, La. To get the latest information on the new machine and Fruit and Produce Packing fruit boxes, write L. K. Ketler, Fruit and Produce Packing Co., 700 West Morris St., Indianapolis, Ind.



Pump Profits

We have been using a new self-priming pump in our orchard which you should know about. For filling our spray tanks, doing supplemental irrigation and even spraying, the little giant has no equal. Powered by a Briggs and Stratton one cylinder, four-cycle engine, it starts with one or two quick pulls of the recoil starter and pumps at pressures of 150 pounds at 10 gpm. We have used the pump in sandy water and for pumping captan, glyodin, and other fungicides and insecticides without wear or harm to the neoprene impellers. In fact the little pump does about everything. You, too, would be wise to invest in a Pacific Marine pump. They cost only \$145 F.O.B. Seattle and will quickly earn their original investment. Write Bob Ladd, Pacific Marine Supply Co., 1223 Western Ave., Seattle, Wash.

New Apple

Growers in the Northwest are watching and planting a new Delicious apple. The new variety, called Redspur, is a semi-dwarf and was discovered as a whole tree bud sport in a block of Starking Delicious in the Richey & Gilbert orchard near Parker, Wash. The tree has a very compact type of growth, forming more spurs per unit length of wood, thus lessening terminal growth. The new variety has been granted a patent, and propagation rights have been assigned to Columbia & Okanogan Nursery. You'll want to know more about this promising variety. Write John Snyder, Columbia & Okanogan Nursery, Box 116, Wenatchee, Wash.

SEPTEMBER, 1959

FACTS ABOUT OUR FORESTS—

Surprisingly FARMERS own 34% of the total commercial forest land, and nearly 50% of the privately-owned forest land in the United States.

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NAILED WOODEN PICKING BOXES are available in all growing districts.

Rigid and sturdy construction

Economical—
a 10 year life span of active use.

Adapted for mechanical handling.



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Amazing **NEW** **WINPOWER Agrotiller**
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Rotary tillage
blazes new trail
in farming . . .

Amazing new Agrotiller is a heavy-duty tillage tool that boosts fertility and yields, retards soil erosion, cuts cultivation time, puts vital nitrogen back in soil. Self-sharpening rotor blades. Mounted on trailing models. 50", 60", 70" cutting widths.

Does all these tough jobs well:

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- ★ Weed control
- ★ Turning stubble
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- ★ Plows, discs, harrows and mulches in one operation
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- ★ Turning corn stalks and green roughage

Write today for free folder on this amazing Rotary Tiller, hailed by progressive farmers and farm publications; greatest new product response in our 35-year history!

WINPOWER Agrotiller
Winpower Mfg. Co., Newton, Iowa

**Fast
Easy
Low-Cost
Pruning**

NEW

**Homelite
Electric Pruner**

- Cuts cleanly up to 1 3/4" without crushing
- Only 6 1/2 pounds
- Won't bind . . . spring-loaded kerf wedge prevents limb from closing on cut
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- Runs anywhere from 90-pound Homelite generator or operates on regular house current

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GROWERS OPPORTUNITY PAGE

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AGENTS WANTED: NOW CALLING ON Growers, Nursery and Greenhouse men, Landscapers, etc. Quality line of garden tools and knives. Good commissions. GIFTSEARCHERS, P. O. Box 11603, Mt. Lebanon 28, Pa.

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2 FOOD MACHINERY APPLE PEELERS. Good condition. Will sacrifice. JOSEPH M. ACKLES, Griggsville, Illinois.

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MODERN AUTOMATIC ELECTRIC CIDER presses for roadside stands and small orchardmen. Presses 10 gallons to 15,000 gallon capacity. Everything for the cider maker, ball bearing graters, press racks, cloths, packing, valves, labels, filters, pasteurizers, bottling equipment. Write for supply catalogue. W. G. RUNKLES' MACHINERY CO., 185 Oakland St., Trenton 8, N.J.

CIDER MILL SUPPLIES: USED PRESSES, cylinder packings, hydraulic cylinders, hydraulic pumps, nylon and cotton press cloths, press racks, complete engineering service available along with all types of used processing equipment for apple juice industry. Write for our prices. DAY EQUIPMENT CORPORATION, 118 W. Lafayette St., Goshen, Indiana. Ph. 3-1692.

CIDER PRESS GOOD USED THOMAS Albright with capacity to sixty barrels a day. Includes elevator, grinder, wood press cars. VFW NATIONAL HOME, Eaton Rapids, Michigan, tele. Eaton Rapids 2111.

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DOGS FOR SALE, REGISTERED GREAT Dane pups. Champion stock. BERNARD HANTOWER, Rt. 1, Rushtown, Ohio. Phone Portsmouth exchange Blackburn 9-5049.

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BUY SURPLUS DIRECT FROM GOVERN- ment at tremendous savings, farm tools, machinery, truck, jeep, tractor, power units, hundreds others listed in our bulletin. Price \$1.00. GOVERNMENT SURPLUS SALES, Box 169ARG, East Hartford 8, Conn.

SENSATIONAL GARDEN TRACTOR. HOES between plants and rows, including strawberries. Eliminates hand hoeing. Standard in size, yet entirely different. Patent 2742840. Also tillage. Fantastic offer to first few inquiries. AUTO HOE, DePere 8, Wisconsin.

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28 SPEED SPRAYER, 36 SPEED SPRAYER Bean 35 PTO sprayer, Bean 35-T, Bean 14-MT. 500 gal Myers PTO, Bean Royal 50 and 35 pumps. New-used. Bomber tires & tubes. Bargains. 70,000 new crates. Small grader. CORY ORCHARDS, Cory, Indiana.

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NEW AND USED ICE CRUSHER SLINGERS bought and sold. Tell us your needs. Your complete source on ice equipment and supplies. Write for free catalog. INDEX COUPON AND SUPPLY COMPANY, 612 Indiana Avenue, La Porte, Indiana.

ORIGINAL MANUFACTURER HYDRAULIC juice presses, hand and power operated, designed for small and large volume production. Press cloths, press racks, packings, valves, filter cloths and other supplies. THOMAS ALBRIGHT COMPANY, Goshen Ind. Phone 3-1785.

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4 HP GARDEN ROTARY TILLER, SPRAYER, tractor. Combined all \$119.00 Special. \$227.00 Value. UNIVERSAL MFG., 324 West Tenth, Indianapolis 2, Indiana.

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BEAN SPRAYER 300 GALLON POWER take off. \$600.00. Niagara peach and apple grader, six-hole facing table, basket turner complete outfit with three horse motor in excellent condition \$850.00. 600 orchard crates 25¢ each. Picking ladder 6-8 and 10 foot 50¢ foot. 500 gallon water tank \$25.00. Picking bags \$2.00 each. HOMER GODWIN, Emison, Indiana.

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FRIEND 16" APPLE GRADER AND BRUSH- er with 2"-2½"-3" sizes, bins, etc. \$450.00. Too small for our operation. H. WAMPLER FARMS, Dayton 15, Ohio.

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GRAY HAIR RESTORED TO THEIR NAT- ural color, this liquid stops falling hair and rids dandruff. \$2.00 Postpaid. FENDRICKS, 114 N. 6 St., Allentown, Penna.

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WEAVE RUGS—MAKE GOOD PROFITS. NO experience necessary! Free Catalog, sample card, and low prices on carpet warp, rug filler, looms, parts, inexpensive beam counter. If you have loom, please advise make, weaving width. OR. RUG COMPANY, Dept. 9965, Lima, Ohio.

ORCHARDS FOR SALE

150 ACRES FOR SALE. INCLUDES GRAPES, sweet and sour cherries, peaches, pears, prunes, currants, apples, refrigerated cold storage, four houses, roadside market, open land, 100 acres in fruit, mostly in bearing, stocked private lake, contact owner. WALTER FALVAY, Westfield, N.Y. Telephone Fairview 6-2970.

FOR SALE: 98 ACRES IN APPLES—PEARS —Cherries—211 acres in timber. High elevation and in good production of quality fruit. All necessary machinery & equipment, packing-house and storage. 25,000 bushel crop of apples will be the bonus to a quick buyer. TROUTMAN ORCHARDS, Millertown, Perry County, Pennsylvania.

IDEAL ORCHARD LOCATION WITH ½ mile of Inland Lake frontage, about 75 acres of producing apple trees. Best varieties; exceptional air drainage; equipped; and irrigation. One hour to Benton Harbor market. Spacious ten-room home with furnace, two baths and fireplace. See it. Aged owner selling. Will consider reasonable terms. Write or phone: DAVID ANDREASON, Realtor, US-12, Sawyer, Michigan. Phone: New Troy, Hazel 6-1717.

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RAISE ANGORA, NEW ZEALAND RABBITS on \$500 month plan. Plenty markets. Free details. WHITE'S RABBITRY, Delaware, Ohio.

EXTRA DOLLARS RAISING ANGORA AND New Zealand white rabbits. Ready market for your production. Free details. Martin's Rabbitry, Morgantown, Ky.

AMERICAN FRUIT GROWER

SITUATION WANTED

HORTICULTURE GRADUATE WANTS TO learn orchard management. Experienced government inspector. 28 years old, family, prefers Midwest. Box 200, AMERICAN FRUIT GROWER, Willoughby, Ohio.

EXPERIENCED, AMBITIOUS FRUIT GROWER desires position as working manager or foreman on large orchard. Middle-aged, married. Prefer Eastern States. Best references. AMERICAN FRUIT GROWER, Box 201, Willoughby, Ohio.

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WANTED: USED APPLE SCREENS. PLEASE advise price. SOUTH HURON ORCHARDS, 38035 South Huron Road, New Boston, Michigan.

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American Fruit Grower Publishing Company needs spare-time or full-time representatives to accept subscriptions from fruit and vegetable growers, shippers and packers. Representatives are needed in all fruit and vegetable producing areas. No experience is necessary. Just send your name and address and we will send you FREE credentials and our tested-method sales kit. There is no obligation. You can start making an extra \$25 a month right away. Write B. Blair,

AMERICAN FRUIT GROWER PUBLISHING COMPANY

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FOR SALE

Red Raspberry Plants. The Largest, Best Selling, shipping and canning berry grown. Will grow and produce in any climate. Proven to be superior to any other Red Raspberry. Satisfaction Guaranteed. State Inspected. Will replace all plants that do not grow.

RALPH MATHISON, Route 2, Alpena, Mich.

T. B. West & Son

MAPLE BEND NURSERY
FRUIT TREES ORNAMENTALS
SMALL FRUIT PLANTS TREES AND SHRUBS

Also Dwarfs in the Popular Varieties

FERRY, OHIO

WANTED

MEN AND WOMEN

GROW MUSHROOMS. Cellar, shed and outdoors. Spare, or full time, year round. We pay \$4.50 lb. dried. We have 29,000 customers. FREE BOOK. Washington Mushroom Ind., Dept. 321—2954 Admiral Way, Seattle, Wash.



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SEND NO MONEY for this big box containing full size packages of famous Blair Quality Products (\$4.00 retail value) plus the Catalog, Premium Offers, etc.

Just write name and address above, tear out and mail this ad for his assortment of full-size packages of Cosmetics, Flavorings, Foods, etc. Show to friends, neighbors, earn good money, full or spare time taking orders for bargain in more than 200 home necessities. You don't pay us one cent to start. I supply products for FREE TRIAL to start you earning money and I'll help you get products on credit. Cut or tear out this ad today, write name, address above for Assortment, and Money-Making Plans.

BLAIR, Dept. 440CS, Lynchburg, Virginia

YOUR VINES WILL TELL

(Continued from page 9)

such high amounts that additions are not necessary.

4) Obtain an analysis of the soil to help in determining the rate of application of the deficient element.

A soil test alone is useful on a site to be planted with grape vines *only* if soil test data have been correlated with vineyard fertility trials. For example, for field crops on Chenango soils, a response to added potassium may be expected if the exchangeable potassium is less than 80 pounds per acre. On Chenango soils, grapes have responded to additional potassium when the soil had 200 to 250 pounds of exchangeable potassium. The correlation may vary with the nature of the soil testing procedure.

With deficiency symptom ratings and/or petiole analyses, a soil test is also useful in determining the rate of application of the element that is deficient. In less than 2% of the leaf area is chlorosed by potassium deficiency in early September on a clay soil of pH 7, more than twice as much potassium fertilizer is needed as for a sandy soil whose pH is 5.

5) Apply the mineral nutrient according to the severity of the deficiency.

If the application of potash, magnesium, or manganese is made before harvest, the rate can be varied with the severity of the symptoms. Where petiole analyses are used to identify the symptom, the application should be restricted to the area represented by the sample.

6) Determine the vine vigor and compare with the specified vineyard goal.

With vines whose foliage is free of deficiency symptoms and where the non-nutritional factors are not limiting, vine vigor can usually be increased or decreased by variations in water and nitrogen supply. The vineyardist's tools here are weed control and spring nitrogen fertilization, varying from 0 to 80 pounds of nitrogen per acre. THE END.



DWARF FRUIT TREES

Ideal for home gardens, require little space, full sized fruit, begin fruiting 2nd or 3rd year. Enjoy delicious fruit from your own trees. We have dwarf peach, apple, pear and new North Star cherry. Also new grapes, berries, nut trees, fruit trees, blueberries, strawberries, shade and ornamental trees. Miller's color catalog FREE.

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DWARF APPLE TREES

Available on Mailing I, II, VII, IX, Mailing Merton 106, 109, 110 and 111.

DWARF PEAR TREES

budded on Old Home

We are one of the country's oldest Nurseries and the largest grower of fruit trees east of the Mississippi River. If you have a special strain or selection, we will bud on contract for you.

Write us for commercial fruit growers price list.

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Dept. AFG-9 Dansville, N.Y.

PEACH TREES LOW AS 20c

Cherries, pears, plums, nut trees, strawberries, blueberries, dwarf fruit trees. Grapes 10c. Shrubs, evergreens, shade trees, roses 25c up. Quality stock can't be sold lower. Write for FREE color catalog and \$2.00 FREE bonus information.

TENNESSEE NURSERY CO., BOX 4, CLEVELAND, TENNESSEE

FRUIT TREES, STRAWBERRY, RASPBERRY AND BLUEBERRY PLANTS



Dwarf Apple Trees on Mailing 9, 7, 2, 1 root stock, Nut and Shade Trees, ornamentals. Complete line highest quality nursery stock at low prices. Get our free 60-page catalog and planting guide, then order for planting this fall!

BOUNTIFUL RIDGE NURSERIES
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Certified Cultivated Blueberry

10 BEARING AGE PLANTS • \$4.50

EARLY—MID SEASON—LATE

Send for Literature and Price List

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17 VARIETIES

MONROE FARMS

BOX 426 BROWNS MILLS, N.J.

DEPENDABLE FRUIT AND NUT TREES, SMALL FRUITS, ORNAMENTALS, and GENERAL NURSERY STOCK. WRITE FOR FREE CATALOG.

CUMBERLAND VALLEY NURSERIES, Inc.

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TREES COMPLETE LINE

- Fruit—Dwarf
- Flowering
- Shade
- Berry Plants, Roses, Bulbs

• FREE CATALOG

Tualatin Valley Nurseries SHERWOOD, OREGON

DWARF FRUIT TREE UNDERSTOCK

APPLE • PEAR • PEACH • PLUM
APRICOT • CHERRY • NECTARINE

Southern Dwarf Nursery

Box 201 Medford, Oregon

Control of Condition Is Next in Line

THE summer meeting of International Apple Association in Seattle, Wash., stressed the importance of a condition-control program so that the consumer can have the crisp, juicy apples he prefers. While this is very important for the apple, it is equally important for all fruits that go to market.

That this is the next major step in marketing is apparent from all sides.

Henry Miller, of West Virginia, suggests that condition requirements be written into grade laws.

Illinois has revised its maturity standards for Golden Delicious with the objective of eliminating low-quality fruit.

New York State has moved to protect CA (controlled atmosphere) fruit by requiring the registration of

owners and operators of CA storages. Periodic inspections are made to see that the CA storages are working properly.

Harold Copple, of Wenatchee, Wash., explains that western growers are attacking quality problems by planting red color sports, by better nitrogen fertilizer practices, by more spot picking, by packing house pools based on condition as well as on grade and size, by increased and more efficient cold storage, and by faster movement of fruit out of the orchard through bulk handling.

All of this is in the right direction, and it will pay off. Further, the program must eventually be national in scope. Nothing hurts the sale of good fruit more than some poor quality junk in the next bin—no matter where it comes from.

Mechanical Harvesting Moves Ahead

FOR a very long time AMERICAN FRUIT GROWER has been trying to drive home the importance of removing the hand labor bottleneck from the fruit harvest. Most operations, from the planting of the tree to the sale of the fruit to Mrs. Housewife, have become, to some degree at least, mechanized. But harvest has been the problem.

To be sure, we have attacked the problem from both ends and tried to strangle it. At one end we have lowered the height of trees, we have learned how to promote annual bearing and to grow crops of uniform size and color. This facilitates harvest and handling.

At the other end of the line have come bulk handling, forklift trucks, automatic dumpers, giant graders, and automatic baggers.

Now we are concentrating on harvest. The three-tier picking crew was a step but did not go far enough. Dwarfed trees are coming ahead and will help. Somehow, somewhere we will eventually lick the hand operation at harvest.

Prune growers and walnut growers have been shaking fruit from the trees for some time. Vegetable growers have learned much in mechanical

harvesting of beans, peas, cucumbers, tomatoes. Blueberries are almost at the point of breakthrough. Now comes the news that there is great promise in shaking cherries from the tree.

It will all come. You can depend upon it. Just encourage everyone you know who has a wild idea of how to do the job. Don't laugh at him and call him odd—just encourage him. It is important.

Fruit Growing is Such Fun!



Fruit Talk

There is nothing new under the sun. Looking out the window of a moving train in northern Italy you see the original mechanical harvest platform—women gathering fruit from a high wagon as oxen slowly draw it down the row of high-headed trees. And in Ireland the original milking parlor comes to the cow in the field—with a horse-drawn wagon, a pail, and a three-legged milking stool.

In west England there is said to be a planting of fruit trees grown as vertical cordons, set 3 feet by 1 foot, or 14,520 trees to the acre!

Far from perfection and much scoffed at by those who rightfully want something better, the time interval in days between full bloom and fruit maturity is still a useful gauge for planning orchard operations. Some say that there is nothing that comes closer to the proper time of picking.

"A tree is a plant that stands by itself and can be climbed in," says John M. Haller in *Tree Care*, an accurate, well-written, readable, practical book "for the tree owner who is interested in life-long beautification of his property, whether he possesses a single tree or a forest."

For an inspiration in what dwarfing rootstocks can do, drop in on F. E. Green, at Allen, Mich., and see his 1900 dwarfed trees, including Northern Spy on EM VII which are fruiting at five years of age.

A farsighted English fruit grower is inquiring for small, plastic, air-filled cushions for fruit packing. Any suggestions?

A little summer browsing brings down from the shelf the *Proceedings of the American Society for Horticultural Science* for 1926, the frontispiece being the photograph of the late Dr. E. C. Auchter, one of the great American leaders in scientific horticulture.

The ASHS secretary summarizes the meeting of this august and learned society by saying, "The business session was the most exciting, the most earnest and the most progressive we have ever had. How the boys drove their points home, how they disagreed; yet no bitterness developed and the rising vote settled all contested points"—the secretary being the late C. P. Close, another of the leaders in fruit growing in America.

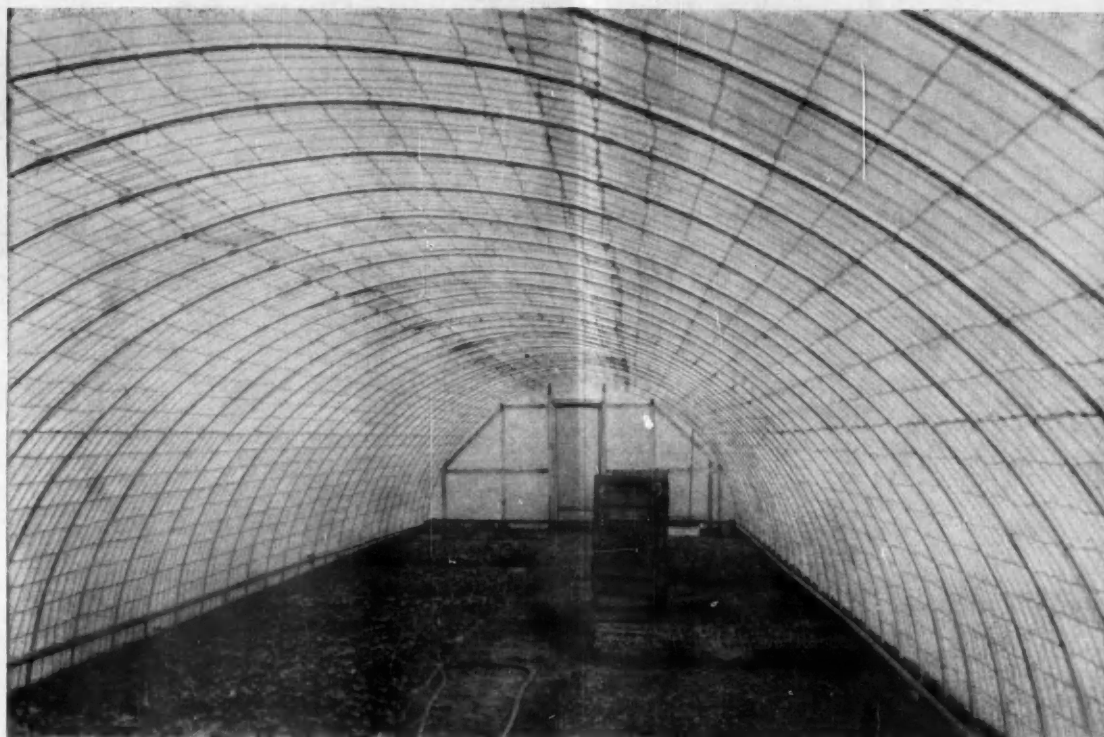
And finally on the last page of the same publication (page 273) appears, "as horticulturists we must look forward to a lifetime of work and service to our entire field . . . no man can master everything . . . enthusiasm and effectiveness are increased by knowing some part of it well . . . the opportunity to do is the greatest reward of doing"—by Dr. E. J. Kraus, another of the great names in horticulture, now retired and living in Oregon.

—H.B.T.

Coming Next Month

- Saving Trees by Inarching
- Grape King of San Joaquin Valley
- Fruit Growing in the Soviet Union
- Know Your Costs
- Fertilizing Tart Cherries

AMERICAN FRUIT GROWER



JUST IMAGINE! A FULL SIZE GREENHOUSE FOR \$900! SO STURDY IT WITHSTANDS VIOLENT STORMS!

For Just \$900 Materials Cost, Bill Cunningham, Owner of Cunningham Gardens, Waldron, Indiana, Built This Greenhouse of VISQUEEN Film. It Would Have Cost \$10,000 If Built Of Glass. He Saved \$9,100!

This is the third greenhouse of VISQUEEN film built by Cunningham. He framed it with arches of $\frac{3}{4}$ " thin wall conduit, set into 20" steel pipe. The pipe is buried in the ground full length. Tubing is joined by concrete reinforcing wire, giving the structure such stability it withstood violent storms last summer.

Other advantages: In addition to initial savings, you can line the interior of a glass or VISQUEEN film house with VISQUEEN film, and save up to 50% in heating costs. The near-perfect dead air space formed between an inside and outside "wall" of film, retards heat loss.

Write Now Or Use The Information Request Tag

You can replace the outside film once each year for less than the upkeep costs of a conventional greenhouse.

You save on labor, too. Plants thrive on less frequent watering required with a greenhouse of VISQUEEN film.

FOR YOUR PROTECTION: Be sure you get VISQUEEN film, marked every foot with the trademark VISQUEEN to protect you against imitation. Only VISQUEEN film comes in seamless widths through 32' for easier handling. Only VISQUEEN film gives you the superior uniformity of thickness that means greater strength.



VISQUEEN film—first and foremost polyethylene film. A product of the long experience and outstanding research of

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Lift 2,000-pound loads with front fork lift on the 460 Utility, and another load on the rear Fast-Hitch forks. Both front and rear forks can be quickly and easily removed to free the tractor for other orchard and field work.

Front fork lift: Harlo

DOUBLE LIFT on a new International® 460 Utility CUTS FRUIT HANDLING COSTS



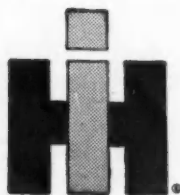
Fork lift: Harlo

For year 'round loading and handling, you'll get efficient, low-cost operation with this 4,000-pound capacity fork lift and reverse steering. This fork lift is available for both International 340 Utility and 460 Utility tractors.

Now, slash fruit-handling costs in orchard and grove with a new International 460 Utility equipped with fork lifts, both fore and aft. Here's big-capacity, carry-all service that speeds short hauls, often displacing the need for loading and unloading trucks.

Power, smooth and BIG, is developed by the new International 460 Utility—over 48 hp at the draw-bar. New 6-cylinder power plant delivers the smoothest, most satisfying tractor power you've ever experienced. Multi-Range design insures top efficiency and economy at every setting from part-load to full-throttle. Gasoline, Diesel, and LP-Gas models.

Built-in brawn assures strength, stamina, and traditional IH-dependability. Bonus brawn improves traction on steep slopes.



Test the new 460 Utility at your nearby IH dealership. Or write for catalog: International Harvester Company, Dept. AFG-9, P. O. Box 7333, Chicago 80, Illinois.

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